

**Statement of Work
Ray Marshall Center
City of Austin
Evaluation of Austin Youth STEM-CE Programming**

The University of Texas Ray Marshall Center has the ability to subcontract within the city of Austin for process development, data collection, and analysis of youth-focused programs in science, technology, engineering, math, creative and entrepreneurship workforce development programs.

Ray Marshall Center researchers will use the next 12 months (March 2017 through February 2018) to work with stakeholders, workforce organizations, local businesses and local school districts, using a collective impact model framework, to establish regional baseline metrics to classify and evaluate current youth focused programs in Science, Technology, Engineering, Mathematics, Creative and Entrepreneurship (STEM-CE) for study and careers. Through the course of this evaluation, Ray Marshall Center will develop appropriate measurement instruments and techniques, produce a report describing current relevant activities, and propose methods and processes for the future evaluation of youth STEM-CE programming.

This assessment of Austin STEM-CE programming will provide insight as to how scarce public resources can be leveraged to secure private participation in the development of a future pipeline of workforce, filled by the city's current youth in poverty, that will connect to quality jobs in Austin's future economy. Findings will be used to propose recommendations for Mayor and Council to consider policy that will enable program development or expansion to properly encourage students from backgrounds in poverty to enter into STEM-CE fields of study and careers. Some shorter-term goals of this intervention include changing attitudes about STEM-CE fields among students participating in such related programming and improving their academic performance in STEM-CE subjects.

During the **next twelve months** Ray Marshall Center will engage in the following activities:

- Review, classify and map all current STEM-CE focused mentoring and training efforts from an initial 20 Austin regional companies;
- Collaborate with business, stakeholders and community leaders to develop a set of metrics intended to assess and steer STEM—CE related mentoring and training efforts to students in Title I schools;
- Determine the feasibility of obtaining metrics and developing where necessary methods, including surveys, to obtain relevant program performance and outcomes data.
 - Ray Marshall Center will engage with local participating school districts and other agencies to create Data Sharing Agreements to access relevant student records for the purpose of measuring the progress and the performance of current and future STEM-CE focused mentoring and training efforts for students in Title I schools annually.
- At the end of the first year, Ray Marshall Center will produce a Baseline Report, providing context on the community and the primary participants and players in STEM-CE programming.

Included in the baseline report, Ray Marshall Center researchers will assess the extent to which these STEM-CE focused programs may be effectively used to coordinate and scale public-private investment into Title I schools.

- Ray Marshall Center with a University will provide a suggested organizational framework for ongoing public-private investment, a system to attract more companies into partnerships for this intent, and to develop best practices to improve scale and student performance in Tier I schools with existing and new partnerships.

Create a system of baseline reporting and community engagement work by the Ray Marshall Center to provide guideposts to Mayor and Council for future regular evaluations of the STEM-CE programming development and expansion.

The youth workforce development project is a proposed public-private economic and education partnership among Austin's high technology, creative and entrepreneurial companies, including the City of Austin, the Austin Independent School District, with assistance from The University of Texas at Austin. The youth workforce development seeks to engage the private sector to teach and mentor directly and indirectly by proxy 40,000 children in poverty to create a 'generation of students ready for the next generation of jobs'. The City of Austin has developed a plan to provide small property tax breaks based on the State of Texas Chapter 380 agreements to create a ten-year private investment system to "prevent" unemployment before it happens. This program is built upon successful efforts in other jurisdictions and nations that show it is possible to work with children and families in current poverty to enable at-risk students to graduate high school, be employed immediately in well-paying jobs for which they have been prepared, and continue successfully through a university education for higher-paying employment. This program seeks to improve the lives of three generations that otherwise might be in poverty.

Austin is a contradiction with its wealth and poverty, its frequency of high-tech and creative employees, along with its rate of those who leave schools without high school degrees. Kiplinger news ranks Austin the #1 City for the Next Decade. Forbes Magazine calls Austin the number "1" Place to be because Austin is the nation's top economy and fastest growing metropolitan area. Simultaneously, Austin experiences rapidly growing poverty, estimated by the Brookings Institute at the second fastest growing suburban poverty in the United States.

The youth workforce development project will engage professionals from both STEM (science, technology engineering and math) and creative fields, along with entrepreneurs, with students, teachers, parents, employers and educational institutions. The intervention is designed to harness the knowledge of the scientific and entrepreneurial businesses of Austin and their brightest and most successful employees to prepare children now in poverty for high-paying professional positions that pay \$100,000 or more per year in target incomes.

The City of Austin seeks to demonstrate a real Return on Investment (ROI) by reducing poverty by 25 percent by mobilizing services from Austin's innovation and entrepreneurial sectors to enable children in poverty to have an opportunity to have satisfying, challenging, and well-paying careers. Austin companies are already engaged in major STEM and mentoring initiatives. This project seeks to expand and redirect that engagement to schools and children in poverty, to document both narratives of changed lives as well as a measurable ROI. When this generation reaches adulthood, not only will the adults not be in poverty, but their children will no longer be in poverty, reducing government expenditures, increasing the local tax base, and improving the quality of life in Austin.

Task 1: Return on Investment

The University economic and research team will collect and validate data to support an evaluation of financial outcomes resulting from existing adult training programs (a sample of 300 adults will be used). The workforce research will form the basis of metrics and recommendations to Mayor and City Council on future funding and evaluation strategies. The research will be included in performance metrics for the Regional Workforce Master Plan. The data will also provide a basis for measuring success through a fact based financial return on investment impact analysis for hard to employ and middle skilled jobs associated with emerging new Chapter 380 Agreement economic incentive policy. The data based research responds to City of Austin Auditor requests for outcome based workforce contract measures; and, the research will provide the system, rationale and financial basis for expanding the pipeline of youth living in poverty to fill the vacant jobs in the technology cluster industries of Austin.

The specific research work plan will include data collection and interviews with an estimated 300 individuals formerly trained through existing workforce efforts. The evaluation will determine if the individuals remain employed, their salaries, their current use or nonuse of government subsidies and services, and any added value of the training. The research will be used to present a return on investment on individuals who previously received training and obtained middle skill employment. The outcome based impact model will calculate the amount of taxes now being paid by the individuals, and municipal cost savings estimated in five areas: reduced need for affordable housing, reduced need for AE energy subsidies, reduced city public health usage, reduced involvement with the city and county court & criminal justice system, and reduced jail and imprisonment costs. The data will be used to evaluate current and future workforce strategies effectiveness, provide an independent third party evaluation of pathways to careers that have been successful, and provide an estimation of future return on investment to the municipality in terms of reduced need for services, and improved tax generation.

Task 2: Best Practices in Poverty Prevention

The second methodological challenge is how to implement the youth and adult workforce development programs: how to encourage student participation, private sector leadership and the related transformation of a pipeline to high paying careers. Since Lyndon Johnson's 'War on Poverty' there have been many community-based efforts to prevent poverty through education. Which of those programs were successful and why? Which of those programs did not deliver the expected outcomes and why? The workforce

development project's goals are not easy to achieve. The Economic Development Department's goal seeks to:

- Move a minimum of 10,000 adults into middle skilled jobs over a 5 year period.
- Transform a minimum of 4,000 children per year as program participants for ten years, or a minimum of 40,000 children currently in poverty, into an educated technology-savvy workforce that can lead Austin and the US in the future;
- Contract performance and voluntary-based participation of an array of science, creative, entrepreneurial and global companies in STEM, through incentives for economic service, or voluntary activity;
- Select future target careers through data driven forecasts of innovation opportunities in industries of the mind and their high-paying jobs;
- Mobilize private sector science and entrepreneurial companies and their leadership to recruit their brightest minds in cooperation with science teachers, for hands-on business projects that can be taught to the youth;
- Identify and advertise industries of the mind to inspire Austin's youth in grades four through seven and their parents on the economic benefits and satisfaction in STEM careers;
- Provide hands-on paid internships for students in grades 8 - 12 that produce real-time science and technology case studies and resources;
- Create predictable long-term financing for city government and residents through the increasing ROI due to the reduced cost of subsidizing poverty and increased taxes generated from the same population;
- Increase public-private revenues to schools and nonprofit STEM training enterprises over the ten-year longitudinal span being evaluated to provide economic return on investment data;
- Enhance family disposable income for families in poverty; and
- Provide an exit strategy to children in poverty through a larger private revenue stream aiding residents formerly in poverty and now gainfully employed in high end employment or through owning entrepreneurial and technology based companies in Austin.

Researchers involved in this second component will seek to identify and articulate best practices. The workforce development program will seek to increase tutorials, STEM-assistance, and internships as well as creative and entrepreneurship trainings.

Project Deliverables and Schedule

August 1, 2017 Texas at Austin	Contract completed between City of Austin (COA) and the University of
August 1, 2017	Project begins
September 31, 2017	Detailed project implementation plan proposal
October 31, 2017	COA approves project implementation
December 15, 2018	Draft reports submitted
January 15, 2018	Public meeting on workforce development
February 31, 2018	Final draft reports on workforce development
April 31, 2018	Final report